

## Correlation of dental anxiety with oral health status among 12-15 year adolescents

G. Shailaja\*

*Department of Oral Pathology, SVS Dental College, Mahaboobnagar, Telangana State, India*

### ABSTRACT

**Background:** Dental anxiety is considered to be the main reason for behavior management problems and avoiding dental care resulting in lack of regular dental care and delay in necessary treatments. **Materials and method:** The present cross-sectional study was performed among 12-15 year old in the private schools, Mahaboobnagar, Telangana State. To determine the association between Dental Anxiety using Modified Child Dental Anxiety Scale (MCDAS) With Oral Health Status. The sample size taken for the study was 500. **Results:** A sample of 500 school children/ adolescents comprising of 250 (50%) males and 250 (50%) females participated in the study. The majority of the study population had no history of previous dental visits (320; 64%) and had the habit of brushing once daily (350; 70%). **Conclusion:** There was a significant difference between the means from Q3-Q8. There was no difference between the means from Q1-Q2.

**Key Words:** Dental Anxiety; Modified child Dental Anxiety Scale; School children

### Introduction

Dental anxiety shares similar characteristics with many clinical anxiety disorders, and this is especially the case with other specific fears and phobias. These often debilitating conditions comprise several different dimensions, including cognitive, emotional, behavioural and physiological components [1]. In addition, people with dental anxiety often have poorer oral health than their non-anxious counterparts [2]. Despite the technological advances in modern dentistry, anxiety about dental treatment and fear of pain associated with dentistry remains widespread. Dental caries is a prevalent pathology that affects almost everyone throughout his or her life. Anxiety is defined as “a fusion of fear with the anticipation of future evil, a continuous fear of low intensity, a feeling of threat, especially of a fearsome threat, without the person being able to say what he or she thinks threatens [3]. The measurement of dental fear is important due to its high prevalence and appreciable individual, clinical, and public health consequences. However, existing measures of dental anxiety and fear (DAF) have theoretical or practical limitations [4].

### Materials and methods

The present cross-sectional study was performed among 12-15 year old adolescents in the private schools, Mahaboobnagar, Telangana State. To determine the association between Dental Anxiety using Modified Child Dental Anxiety Scale (MCDAS) With Oral Health Status among 12-15 year old adolescents. Private school children/ adolescents aged 12-15 years who were present on the day of examination were included in the present study. The sample size taken for the study was 500. The list of schools were taken from the DEO. Based on convenient sampling ten schools were selected. From each school 50 school children/ adolescents aged 12-15 years were selected based on systematic random sampling. Demographic details- age, gender, previous dental visits and brushing frequency A questionnaire measuring the Dental anxiety: Modified Child Dental Anxiety Scale [5].

### Results

A sample of 500 school children/ adolescents comprising of 250 (50%) males and 250 (50%) females participated in the study. The majority of the study population had no history of previous dental visits (320; 64%) and had the habit of brushing once daily (350; 70%).

\*Correspondence

**G. Shailaja\***

Department of Oral Pathology, SVS Dental College,  
Mahaboobnagar, Telangana State, India

**Table 1: Age distribution of school children/ adolescents**

Age in years	Total
12-13	260
14-15	240
<b>Total</b>	<b>500</b>

**Table 2: Question wise frequency distribution of responses to Modified Child Dental Anxiety Scale**

Questions	Relaxed/ Not Worried	Fairly Worried	Worried a lot/ Very Worried
Q1 How do you feel about going to the dentist generally	400	55	45
Q2 How do you feel about having your teeth looked at	450	25	25
Q3 How do you feel about scraped and polished	400	60	40
Q4 How do you feel about having an injection in the gum	100	50	350
Q5 How do you feel about having a filling	250	200	50
Q6 How do you feel about having a tooth taken out	100	50	350
Q7 How do you feel about being put to sleep to have treatment	50	50	400
Q8 How do you feel about having a mixture of "gas and air " which will help you feel comfortable for treatment but cannot put you to sleep	50	50	400

**Table 3: Question wise mean score comparison of MCDAS score based on variables**

Questions	Males	Females	P value
Q1 How do you feel about going to the dentist generally	2.32 ±1.1	2.42 ±1.2	0.3319 (NS)
Q2 How do you feel about having your teeth looked at	1.83±1.2	1.93±1.2	0.3519 (NS)
Q3 How do you feel about scraped and polished	2.01±1.3	2.42±1.4	0.0007 (S)
Q4 How do you feel about having an injection in the gum	3.48±1.4	3.95±1.4	< 0.0001 (S)
Q5 How do you feel about having a filling	2.58±1.4	3.07±1.4	0.0002 (S)
Q6 How do you feel about having a tooth taken out	3.42±1.4	3.95±1.4	< 0.001 (S)
Q7 How do you feel about being put to sleep to have treatment	1.86±1.1	2.23±1.4	0.0011 (S)
Q8 How do you feel about having a mixture of "gas and air " which will help you feel comfortable for treatment but cannot put you to sleep	2.58±1.4	3.07±1.4	0.0002 (S)

**Discussion**

Dental anxiety scale (DAS) and the Modified DAS were used to assess dental anxiety in adults. Though, CFSS-DS is a 15- item dental-specific measure that

rates to various dental-related situations/ treatments (e.g. dentists, injections and having somebody examine your mouth"); it is difficult for young children to complete competently [6]. This limitation has led to the

development of another scale Modified child dental anxiety scale (MCDAS) Wong et al [5] which is aimed at children. This 8 item scale has four questions were based on the original Corah's DAS.

A sample of 500 school children/ adolescents comprising of 250 (50%) males and 250 (50%) females participated in the study. The majority of the study population had no history of previous dental visits (320; 64%) and had the habit of brushing once daily (350; 70%).

In this study, 64% of the study participants had never visited the dentist which was in contrary to the findings of the study by Amin et al [7] where 52% of them had never been to the dentist. When brushing frequency was considered most of them brushed once daily 70% which was higher than that reported by Ahad and Gheena [8] (46%) and Priya et al [9] (36.1%).

In this study, more than 75% of study population were "very worried" for treatment options like having an injection in the gums Q4 and tooth being taken out Q6 (75%). Similar findings were reported by Wong et al [5], among children aged 8-15 years old. The authors reported majority were "very worried" about Injection (75%) and tooth taken out (75%) as compared to other treatment modalities like scaling (8%) and filling (8%). There was a significant difference between the means from Q3-Q8. There was no difference between the means from Q1-Q2. Female had higher significant total mean MCDAS score as compared to males.

For Q1- difference between the means for male and female was  $2.32 \pm 1.1$  and  $2.42 \pm 1.2$  respectively. For Q2- difference between the means for male and female was  $1.83 \pm 1.2$  and  $1.93 \pm 1.2$  respectively. There is an association between dental anxiety and Oral Health Status.

### Conclusion

The results of the present study showed that more than half of them responded "worried a lot/ very worried". Female had higher significant total mean MCDAS score as compared to males. There is an association between dental anxiety and Oral Health Status.

**Conflict of Interest:** None

**Source of support:** Nil

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